

IDEAL COMMUTATOR RESURFACERS**HAND TYPE RESURFACERS**

Hand Type Resurfacers are equipped with various style handles to meet conditions found in any type of commutator or slip ring. They are used by simply holding the Resurfacer against the commutator and moving it from side to side as the motor turns over, under its own power.

PENCIL TYPE**Pencil Type (No Handle)**

Used for fans or signal motors, for auto generators, locomotive headlight motors and other fractional H.P. motors. Standard size $6 \times \frac{3}{8} \times \frac{3}{8}$ inches.

FAN—SMALL MOTOR TYPE**Fan, Auto or Small Motor Type**

This Ideal Resurfacer has a medium-grade stone on one side and a finish-grade stone on the other end of the handle. For use on small fractional H.P. motors. Standard size, $\frac{3}{4} \times 1\frac{1}{2} \times \frac{3}{8}$ inches.

STRAIGHT HANDLE TYPES

This type is used primarily on inaccessible types of commutators on small or enclosed motors.

Dimens., Inches					
L.	W.	T.	L.	W.	T.
1	x 1	x 2	2	x 1	x 2
1	x 1	x 1	3	x 1	x 2

TRAMWAY, VERTICAL AND RAILWAY HANDLES

For Medium Size Motors and Small Generators

Dimens. Inches		
L.	W.	T.
2	x 1½	x 2
2	x 2	x 2
3	x 2	x 2
3	x 3	x 2
4	x 3	x 2

Specify grade.

**Tramway Handle****Vertical Adj. Handle****Railway Handle**

Tramway Handle — Stout handle with a good grip, permanently mouned at a 45-degree angle.

Vertical Adjustable Handle—The knob handle is fastened permanently. The extra rod handle makes this type universal to meet practically all conditions.

Railway Handle — A stout handle with a good grip, permanently mounted in a vertical position.

POCKET TYPE**2-in-1 Tool—Handy, Pocket Type.**

Made up in any combination of the five grades, two grades being cemented together. Standard sizes, $6 \times 2 \times 1$; $8 \times 2 \times 1$ inches.

Specifications and prices on request.

IDEAL COMMUTATOR RESURFACERS

SAW HANDLE TYPE



"Saw" Handle

Dimensions in			Inches		
L.	W.	T.	L.	W.	T.
4 x 1	x 3		5 x 3	x 2	
4 x 1½	x 3		5 x 3	x 3	
4 x 3	x 2		6 x 2	x 3	
4 x 4	x 3		6 x 4	x 3	
4 x 2	x 2		8 x 4	x 3	
5 x 2	x 3				

This type is for use on large motors, small rotary converters, motor-generator sets, telephone generators, etc. Equipped with the convenient "Saw" type handle.

SLIP RING TYPES

These types are made to meet conditions of all rings. When space permits, use a resurfacer about 1-inch wider than the ring, thereby bridging over the entire width. The resurfacer should be three times as long as the flat spots as bridging over them assures a perfect job.

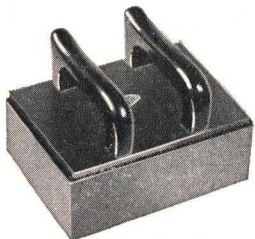


Slip Ring Type

Supplied with "Saw" type handles. Specify diameter of Ring so stone may be arced to fit contour which is recommended for ring grinding.

Dimensions in			Inches		
L.	W.	T.	L.	W.	T.
4 x 1	x 3		4 x 2	x 3	
4 x 1½	x 3		5 x 2	x 3	
4 x 3	x 2		5 x 3	x 2	
4 x 4	x 3		5 x 3	x 3	

DOUBLE SAW HANDLE TYPE



Double Saw Handle

Dimensions in			Inches		
L.	W.	T.	L.	W.	T.
4	8	3	5	9	3
5	7	3	6	10	3

Handle is mounted parallel to first dimension.

All sizes listed are equipped with two handles, which allows for two hand control. Supplied in either the convenient "Saw" or "Flat-Iron" type handles as selected.

BLOCK HANDLE OR TOOL TYPE

For use with precision grinders. Equipped with wood block handles. Can be made in any length or any size cutting face.



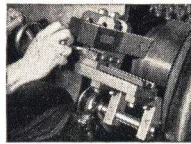
Dimensions in			Inches		
L.	W.	T.	L.	W.	T.
1	x 1½	x 5	2	x 2	x 5
1	x 2	x 5	1	x 1½	x 8
1½	x 2½	x 5			

Specifications and prices on request.

IDEAL MOTOR MAINTENANCE PRODUCTS

IDEAL PRECISION GRINDERS

For Commutators and Slip Rings



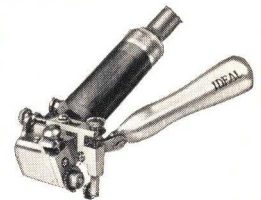
Portable. For truing commutators and slip rings in their own bearings at normal operating speeds. Accurate to 1/1000 inch. Inherent "slaps" and bearing eccentricities automatically allowed for. New bracket supports make possible use on

practically every type of machine. Carrying case at no extra charge.

Model	Base	Each	Model	Base	Each
Midget	6-inch	\$ 72.50	Ideal	12-inch	\$145.00
Perfect	12-inch	120.00			

IDEAL UNIVERSAL COMMUTATOR MICA UNDERCUTTER

For field and shop use — heavy duty service. Used for large or small commutators. Undercuts in narrow, confined spaces and to within ¼-inch of risers; works in spaces only 2¾ inches wide. Undercuts without removing brush riggings. Compact, speedy, accurate and easily controlled. Carrying case at no extra charge.



Cat. No. 25-029 complete with 115-volt, 60-cycle Motoreach \$145.00

DIRECT DRIVE MODEL

The Direct Drive Model for medium service in the field and shop requires no dismantling of brushes or motor. The Cutter Head only 2½ inches wide cuts to within ⅛ inch of the riser.

Designed for use with ⅜ inch diam. x ⅝ inch bore Ideal Saws and Milling Cutters.

Overall length, 14½ inches; width of head 2½ inches; cutter spindle speed approximately 3,000 r.p.m. Motor is "universal" type for either AC or DC. Shipping weight 9 pounds.

Cat. No.	Rating	Price Each
25-001	115 volt, AC-DC.....	\$100.00
25-002	230 volt, AC-DC.....	110.00

IDEAL COMMUTATOR SLOTTING FILES



Specially designed for commutator use. Extremely hard, fast-cutting and long lived. Tapered and curved to allow for rocking motion.

Cat. No.	Description	Price Each
20-012	Straight 3-Edge Cutting Type.....	\$1.00
20-013	7-inch Knife Edge Type.....	.90
20-007	Large 8-inch Type.....	1.00
20-008	Small 7-inch Type.....	.95
20-009	9½-inch Single End Type.....	.85

IDEAL GROWLERS

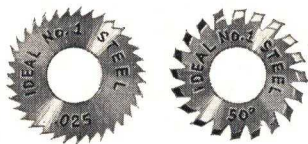


The Ideal Growler is an electrical device specially adapted for locating shorts, grounds, and opens in armatures. Made in many types for use on armatures of the smallest motors and generators to the largest.

Prices and specifications on application.

IDEAL MOTOR MAINTENANCE PRODUCTS

IDEAL COMMUTATOR SLOTTING SAWS AND MILLING CUTTERS



Ideal Commutator Saws and Milling Cutters are the result of years of experimental and test development. Their remarkable long life and sustained cutting and efficiency mean better, faster cutting — higher efficiency and lower costs. They outlast ordinary saws — as proved by actual experience.

High speed steel and special high speed steel. Available in all types and sizes.

Prices on application.



IDEAL BRUSH SEATER

For seating carbon-graphite or metal composition brushes. Brush is accurately seated under operating conditions, without shutting down the machine. Standard size, $4\frac{1}{4}$ x $1\frac{1}{8}$ x $\frac{5}{8}$ face.

Price, Ideal Brush Seater.....each \$0.50

ARMATURE AIR GAP GAUGES



Very useful for plant maintenance work in checking the correct air gap between stator and rotor.

Gauges are made of thin leaves of specially tempered steel. Each leaf is plainly marked for thickness. Each set has a substantial steel case into which the gauges may be folded when not in use. Blades are $\frac{1}{2}$ inch wide. Weight 8-inch size, 4 oz.; 16-inch size, 8 oz.

Cat. No.	Length Inches	Number of Leaves and Thickness (Inches)							
44-001	8	.002	.003	.004	.005	.006	.008	.010	.015
44-002	8	.002	.003	.004	.008	.016	.024	.032	.048
44-003	8	.002	.003	.005	.010	.015	.025	.040	.060
44-004	16	.006	.008	.010	.012	.015	.025
44-005	16	.005	.008	.010	.015	.025	.040
44-006	16	.005	.010	.015	.025	.040	.060

Price: 8-in. length, \$1.65; 16-in. length, \$3.30.

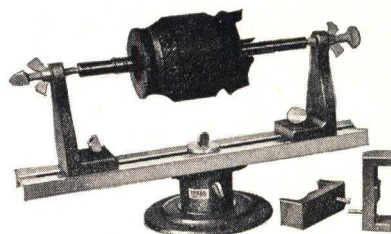
IDEAL COMMUTATOR CEMENT



A non-conductor, regardless of age. Highly adhesive. When once dry it stays in place and will not shrink.

Prices: $\frac{1}{2}$ lb. can, \$1.00; 1 lb. can, \$1.50; 2 lb. can, \$2.50.

IDEAL ARMATURE AND STATOR HOLDER



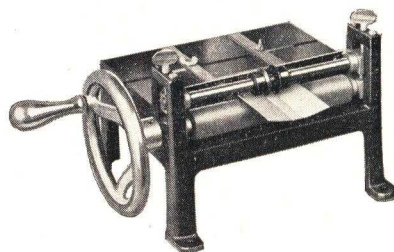
Eliminates makeshift equipment. Holds either armatures or stators while soldering leads, inserting insulation and wedges, banding, re-winding, etc. It takes any make fractional horsepower motor. Easy to adjust for different jobs.

Upper part of frame pivots on ball bearing to most convenient working position. Overall length 22 inches, overall height $12\frac{1}{2}$ inches. Maximum length of armature shaft which can be suspended is 18 inches. Maximum diameter of stator which can be held is 12 inches.

Each upright casting is equipped with a malleable iron thumb screw, the ends of which are machined to a center taper to receive the centers of an armature shaft. Armatures are held by turning these screws into the shaft centers and locking in place with lock nuts. The angle iron cross-arms can be shifted on the base by loosening a thumb screw.

Cat. No.	Description	Wt. Lbs. Each	List Each
16-006	Holder, complete	29	\$46.00

IDEAL INSULATION FORMER

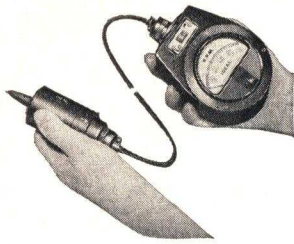


Quickly and easily forms any length of plain or cuffed insulation in any width up to 8 inches. All the slot insulation needed for any job can quickly be turned out with a few turns of the crank. Insures neat fitting and uniform slot and lining, which speeds up winding and prevents burned out armatures caused by lining being torn when coils are tamped into place.

Insulation is accurately guided between the roller and two creasing rollers. A ruler guide makes it easy to set the creasing rollers and guide bracket for any particular slot. Maximum width of insulation trough is $1\frac{1}{2}$ inches, guide brackets adjustable to 8 inches maximum width.

For production purposes the hand wheel may be removed and the roller driven by a small electric motor.

Cat. No.	Description	Wt. Lbs. Each	List Each
40-001	Insulation Former	21	\$70.00

IDEAL ELECTRIC TACHOMETER

Gives accurate check on production speeds. Two sizes for speeds up to 5000 r.p.m. Accurate to plus or minus 1 per cent of full scale deflection.

Consists of small generator coupled to electric meter. Variations in speed of generator are positively and accurately determined by the

meter, which is capable of withstanding a momentary overload up to four times the maximum speed.

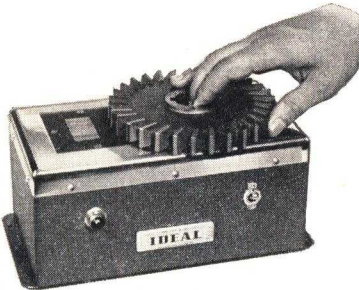
The meter is provided with two scales—"high" and "low," easily changed from one to the other with a switch on side of case. The units may be used together as a "Hand Type" Tachometer, or for many applications including permanent mounting. The generator and meter may be operated as a "Separable Type" and connected only by a two-conductor electric cord. Size of complete unit 3x7½x2½ inches, including ¾-inch shaft extension.

Weight, 3 lbs.

Cat. No.	Description	Wt. Lbs. Each	List Each
50-001T	0-2500 r.p.m.	3	\$92.67
50-002T	0-5000 r.p.m.	3	92.67

IDEAL DEMAGNETIZERS

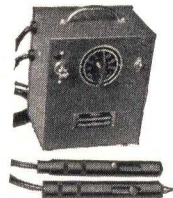
Powerful; portable. Quickly demagnetizes work held in magnetic chucks, tools, drills, punches, dies, etc. Clinging metallic dust, flakes, fine chips, etc., are easily removed by simply passing across the demagnetizer poles.



Large dies, castings, etc., can be demagnetized by moving the Demagnetizer across their surface. Made in two sizes, 5 ampere (6.35 sq. in. pole area) and 15 ampere (17.6 sq. in. pole area).

Weight, 17.5 lbs. and 40 lbs. respectively.

Cat. No.	Description	List Each
13-001	(5 amp. size) 115 v., 50-60 cy....	\$48.67
13-005	(15 amp. size) 115 v., 50-60 cy....	106.67

IDEAL INSULATION TESTER

Detects grounds, shorts and broken wires. Tests up to 2500 volts. Seven test voltages: 500, 1000, 1250, 1500, 1750, 2000 and 2500.

Operates from any electrical outlet. All current carrying parts are full and carefully insulated. Spring operated safety sleeves, over the test points,

which can only be bared by pressing forward the buttons on side of handles. Has three wire safety type cord. Rating 600 volt amp. (maximum).

Cat. No.	Description	Wt. Lbs. Each	List Each
41-001	115 v., 50-60 cycle.....	20	\$73.33

IDEAL COIL WINDING EQUIPMENT**COIL WINDER DRIVE**

Winds many types of coils such as field, mush and armature. Winds loops with diamond, round, square or rectangular cord. Accommodates standard Ideal Coil Winder Heads. Readily takes special forms. Easy to operate. Wide range of speeds adjustable from 41 to 410 R.P.M. Easily read counter records every turn of the machine.

Comes equipped with a heavy-duty, chatter-free clutch and automatic brake which stops the winding head almost instantly when clutch is released.

Maximum torque is delivered through two sets of carefully machined spur gears, driven by a variable speed pulley and ½ HP, 1750 R.P.M. motor.

At a speed of 41 R.P.M. using a Universal Coil Winding Head, the Ideal Coil Winder Drive will wind a 10½ round coil of No. 6 A.W.G. wire, or a 20-inch coil of No. 9 A.W.G. wire. In general, this drive will handle motor winding up to 5 HP.

Cat. No.	Voltage Rating	Price Each
15-017	115 V., 60 Cycle, Single Phase.....	\$395.00
15-018	230 V., 60 Cycle, Single Phase.....	395.00
15-027	220/440 V., 50/60 Cycle, 3-Phase....	395.00

IDEAL COIL WINDER HEADS

Universal Model (Illustrated)—

Winds up to 8 coils in series ranging in size from ⅝ x 6½ inches to 13 x 16½ inches. Easily winds many types of armature, field, transformer, motor coils, etc. Coils are wound from one wire — no soldering. Use an Ideal Coil Winder Drive or on face plate of any lathe having a 20-inch swing or larger.



Price, No. 16-001, Universal Model....each \$100.00

Midget Model—Makes field, mush, armature, transformer and motor coils. Winds loops with diamond, round, square or rectangular cord from 4 x 1¼ inches to 6½ x 8½ inches. Open construction permits winding up to six coils in series, thereby eliminating the necessity of soldering and taping joints.

Price, No. 16-002, Midget Model.....each \$65.50

Armature Winding Yoke—For winding any type of armature from 9 to 19 inches in length. Assures neater and faster armature winding. The armature may be rotated while clamped in position in the yoke.

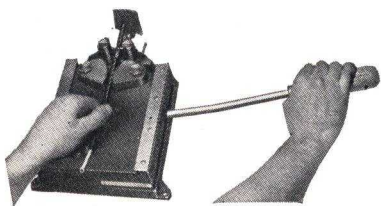
Price, No. 16-004, Armature Winding Yokeeach \$72.50

Armature Winding Head—Adjustable to accommodate armatures up to 3 inches in diameter with 2¼-inch maximum armature stack. Simplifies the winding of small universal, 2-pole DC, or repulsion induction motor armatures. Easy to set up.

Price, No. 16-003, Armature Winding Headeach \$51.00

IDEAL WIRE STRIPPING EQUIPMENT

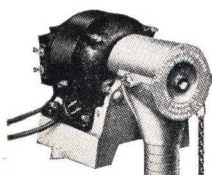
LEVER TYPE CABLE AND WIRE STRIPPER



For stripping all kinds of single and parallel conductors. Strips rubber insulation, asbestos, synthetic (plastic), glass, cambric, etc. Strips cables up to $\frac{3}{8}$ inch diameter — any length. Easy to operate. Straight line pull eliminates scraping and nicking of wire. Well suited for large volume stripping. Blades are quickly interchangeable. Furnished with set of plain blades for stripping parallel wire, heater cord, inner conductor and P.O.S.J. cord. Grooved blades to accommodate other sizes and types of wire are available in 15 standard sizes, and can be furnished at slight extra charge.

Price, No. 45-064—Stripper including one set plain blades.....each **\$120.00**

ROTARY TYPE WIRE STRIPPER



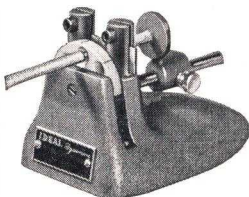
For production stripping. Strips all types of solid or stranded wire up to a maximum of $\frac{1}{2}$ inch outside diameter. Motor is reversible at the flip of a switch, permitting either clockwise or counter-clockwise stripping according to natural twist of wire. Wire

after stripping is properly twisted and polished, ready for terminals or soldering. Easy to operate — simply insert wire, step on foot pedal and give a quick pull on wire being stripped. Cutting blades are of finest tool steel, double edged. Blades may be sharpened repeatedly. Furnished with $\frac{1}{8}$, $\frac{1}{4}$ and $\frac{3}{8}$ inch guide bushings.

Price, No. 45-009—115 volt, 60 cycleeach **\$166.67**

BENCH TYPE WIRE STRIPPER

For stripping solid or stranded wire up to $\frac{3}{8}$ inch diameter. Has 8 hole dial wire guide to center different sized wire between cutting blades. Furnished with set of plain blades for stripping parallel wires, heater cords, inner conductors, P.O.S.J. cord, etc. Special grooved blades for stripping rubber, asbestos, and other similar covered wire may be secured at slight extra charge. Mounts on a bench leaving hands free for stripping. Easy to operate — just insert wire between oscillating blades to the adjustable stop, then a quick jerk cleanly and quickly removes the insulation. Eliminates guess work and prevents nicked wires and cut strands.



Price, No. 45-069—including one set (2) plain bladeseach **\$28.00**

IDEAL WIRE STRIPPING EQUIPMENT

"E-Z" FOOT OPERATED WIRE STRIPPER

A production stripper. Strips insulation from 8 gauge, $\frac{3}{8}$ inch O. D. to the very finest wire, single or stranded. Strips all kinds of plain, twisted, parallel cord and P.O.S.J. cord in one operation. Strips outside sheath and both conductors at one time. Particularly designed for rubber covered wire. Two types of blades are furnished — a single V-notch for single conductors and a double V-notch for duplex cord. Easily adjustable for varying diameters of wire being stripped—assures accurate stripping without cut strands, nicked wire, or waste.

Stripper comes complete with sturdy metal stand ready to set up and use. It is foot operated. Every time foot pedal is pressed, the wire is gripped, insulation cut, stripped off and released ready for another wire to be inserted.

Price, No. 45-019 complete with one set (2) single V blades.....each **\$113.33**

HANDI-GRIP WIRE SKINNER AND WIRE STRAIGHTENER

A handy tool designed to cut and strip insulation, scrape wire and straighten kinks and sharp bends. Hardened tool steel blades have the cutting edges hollowed in the center to prevent wire from slipping out of the tool. Blades are removable for resharpening. The unit is light, compact, and sturdy — does not tire hands.

Price, No. 45-021 Wire Stripper.....each **\$1.33**

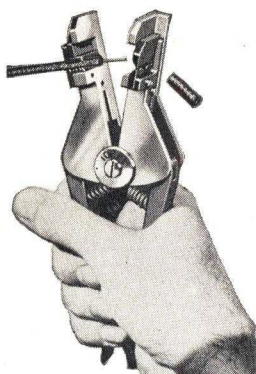
HOT BLADE WIRE STRIPPER



For production stripping. Strips cotton, silk, synthetic (plastic) insulation or rubber coverings from fine, stranded or solid conductors that does not exceed $\frac{3}{8}$ inch. Easy to operate — simply place wire between the blades, depress the foot pedal, give a slight twist to the right or left. A slight pull removes the insulation — leaving an even edge.

Simple adjustments are provided for stripping lengths, diameter of wire, and blade heat. Stripping length is adjustable from $\frac{1}{4}$ to $1\frac{1}{2}$ inches. A "Hi-Lo" switch mounted between the individual blade controls makes possible the adjustment of heat for heavy, average and light insulation. Compact, self-contained, easily installed, modern in appearance. Except for foot pedal, all parts (stripping head, water pan and exhaust) are in a single unit. (Note: This stripper is not suited for stripping asbestos, metallic, or other weather-proof covering.)

Price, No. 45-073 Wire Stripper.....each **\$333.33**

IDEAL STRIPMASTER WIRE STRIPPER

The only hand type Wire Stripper with automatic single-squeeze operation. Exclusive automatic feature holds jaws open after stripping to permit removal of wire and prevent crushing. A single squeeze of the handles strips wire clean and bare up to a full $\frac{7}{8}$ inch. There is no nicking or fraying of wire.

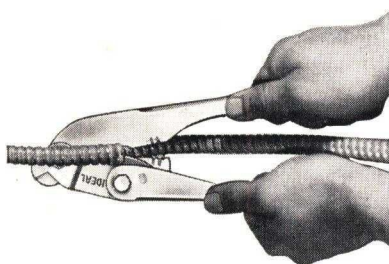
The narrow span between the handles and a light weight of only 10 ounces assure a comfortable grip. Simple design and sturdy construction make it practically abuse-proof. Blades are specially hardened for long service and can be changed with the removal of only two screws.

Strips any of the following wire: Building, fixture or telephone wire — lamp, portable equipment and appliance cords. Automotive wiring, radio, instrument wire and cable — switchboard and aviation wire, also FM and TV down lead wire.

Cat. No.	Wire Gauge	Price Each	Extra Blade No.	Price Per Pair
*45-090	8 to 10.....	\$6.40	L-4419	\$1.33
45-091	10 to 16.....	6.40	L-4420	1.33
*45-092	10 to 22.....	6.40	L-4421	1.33
45-093	16 to 22.....	6.40	L-4422	1.33
45-094	16 or 18 or FM and TV down lead wires	6.40	L-4437	1.33

*Strip only. No cutting edge.

Blades are interchangeable on all models.

IDEAL BX ARMOR CUTTER

Cuts BX Armor in one operation. Just open the jaws and snip. Jaws are formed to take BX cable of any make, two or three wire, No. 10 or No. 14. No adjustments are necessary. Cuts quickly and cleanly without injury to wire insulation.

Handy pocket size. Hardened steel cutting blade is removable for sharpening. Blade is also replaceable. Weight, only 12 ounces.

Price, No. 45-079 BX Armor Cutter.....each \$4.33

IDEAL CABLE RIPPER AND WIRE GAUGE

This ripper cuts cleanly, easily and quickly. Just the tool for use on nonmetallic sheathed duplex cable or lead-covered cable. The case-hardened cutting point gives long service.

Can also be used for ripping outer sheathing of other cords, lead cables, etc., where outside diameter is $\frac{5}{8}$ in. or smaller.

Price, No. 45-018.....each \$0.60